

Winding wires of specially high ...

S/196/63/000/001/014/035
E194/E155

but have the disadvantage of sensitivity to thermal shock. Insulation based on lacquer TL-1 (TL-1) is similar in properties to that based on varnish 124 but is less sensitive to thermal shock. Conductors are also insulated with block-polymer lacquer K-62 and their heat stability may be improved by using nickel-plated copper wire (see Fig.1). Lacquer K-62 is used on nichrome conductors of 0.16-0.56 mm diameter of class F which can operate for 200 hours at 523 °K (250 °C) but the film is too thermoplastic at high temperatures.

Group 2 includes conductors with fluoroplastic film insulation and with insulation produced by treating the wire with a suspension of fluoroplastic and its copolymers. Such conductors are capable of prolonged operation at 523 °K (250 °C). Fluoroplastic film 0.04 - 0.045 mm thick is applied in 2 - 3 layers on the conductor which is then wound over with glass fibre and insulated with thermally-stable insulating varnish. The best quality of insulation is obtained by applying the film to the conductor longitudinally.

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Group 3. Abroad, flexible inorganic insulation is produced by applying a composition of $K_2O \cdot PbO \cdot SiO_2$ 0.015-0.04 mm thick. The Sprague Electric Company (USA) produces conductors grades Segos ST, Segos NT and Tetros for prolonged operating temperatures of 573-623 °K (300-350 °C), in which the copper is protected from oxidation by nickel or by a nickel-cobalt alloy (Segos NT). These conductors were investigated by NIIKP and the following properties were found: breakdown voltage 300 - 600 V, falling to 150 - 200 V after prolonged exposure at 573-673 °K (300-400 °C); the mechanical strength lies between wires grade ПЭВ-1 (PEV-1) and grade ПЭЛ (PEL); elasticity is good and the wires withstand winding round a former with a diameter 3 - 4 times that of the wire when subjected to a temperature of 573 °K (300 °C) for 4 - 5 days. NIIKP is developing the manufacture of these wires.

Group 4. Wires grade ПСДК (PSDK) can operate at 623 °K (350 °C) for 400 - 500 hours, and at 673 °K (400 °C) for 80 - 100 hours. Grade ПСДКТ (PSDKT) can operate 300 - 400 hours at 573 °K (300 °C) and for up to 30 - 50 hours at 673 °K (400 °C). NIIKP is working to improve the thermal stability by using special

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Winding wires of specially high ... S/196/63/000/001/014/035
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fibres-glass (hitherto ordinary alkali-free glass has been used) and by reliably protecting the wire against oxidation in the following ways: by applying a thin sheath of aluminium (bimetallic wire); by using intermediate coatings between the wire and the aluminium (trimetallic wires Cu-Ag-Al, Cu-Ni-Al); and by nickel electroplating. The use of nickel-plated copper wire increased the heat stability of winding wires grade ПНСДК (PNSDK) and ПНСДКТ (PNSDKT) (temporary technical conditions applicable to these grades are tabulated). Figs 2 and 3 show curves of $\tan \delta$ and $\tan \delta$ of these wires against temperature. 8 figures. 15 references.

[Abstractor's note: Complete translation.]

Card 4/14

PRIVEZENTSEV, V.A., doktor tekhn. nauk; SLAVIN, R.M., kand. tekhn.
nauk; KHOLODNYI, S.D., kand. tekhn. nauk; BABAKHANOV, Yu.M.,
inzh.

Study of polychlorovinyl insulation of winding wires of
water cooled electric motors. Elektrotehnika 36 no.8:
4-9 Ag '64. (MIRA 17:9)

by P. S. ...; LARINA, E. F., inzh.

Heat conductivity of winding wire insulation. Elektrotehnika
36 no.4:63-64 Ap '65.
(MIRA 18:5)

BELORUSSOV, Nikolay Ivanovich, inzh.; GLUPUSHKIN, Petr Mikhaylovich,
kand. tekhn. nauk; KONSTANTINOV, Marsaliy Valer'yanovich,
inzh.; PESHKOV, Izyaslav Borisovich, kand. tekhn. nauk;
PRIVEZENTSEV, Vladimir Alekseyevich, doktor tekhn. nauk;
TROITSKIY, Igor' Dmitriyevich, kand. tekhn. nauk;
FEDOSEYEVA, Yelena Georgiyevna, kand. tekhn. nauk; FRIDMAM,
Aron Solomonovich, inzh.; RYZHIKHINA, Ye.G., red.

[Cables and wires] Kabeli i provoda. Moskva, Energiia.
Vol.3. 1964. 469 p. (MIRA 17:12)

PRIVEZENTSEV, V.A., doktor tekhn. nauk, prof.; ANIKEYENKO, V.M., inzh.

Heat resistance of copper and aluminum heavy-duty enameled
wires. Elektrotehnika 35 no.9:30-31 S '64.

(MIRA 17:11)

PRIVEZENTSEV, V.A., doktor tekhn. nauk, prof.

Winding wire with exceptionally high heat resistance.

Trudy MEI no.39:325-340 '62.

(MIRA 17:6)

AZOVSKIY, Yu.S.; GUZHOVSKIY, I.T.; DUSHIN, L.A.; PRIVEZENI'SEV, V.I.;
CHURAYEV, V.A.

Microwave methods for studying plasma clots. Inzh.-fiz.
zhur. 6 no.9:57-60 S '63. (MIRA 16:8)

1. Fiziko-tekhnicheskii institut AN UkrSSR, Khar'kov.

ACCESSION NR: AT4036080

S/2781/63/000/003/0357/0364

AUTHORS: Dushin, L. A.; Privezentsev, V. I.; Skibenko, A. I.

TITLE: Microwave methods of plasma measurement in an external magnetic field

SOURCE: Konferentsiya po fizike plazmy* i problemam upravlyayemogo termoyadernogo sinteza. 3d, Kharkov, 1962. Fizika plazmy* i problemy* upravlyayemogo termoyadernogo sinteza (Plasma physics and problems of controlled thermonuclear synthesis); doklady* konferentsii, no. 3. Kiev, izd-vo AN UkrSSR, 1963, 357-364

TOPIC TAGS: plasma research, microwave plasma, plasma magnetic field interaction, plasma decay, plasma concentration

ABSTRACT: The theory of propagation of radio waves in magnetoactive plasma (V. L. Ginzburg, Rasprostraneniye elektromagnitny*kh voln v plazme, Fizmatgiz, M., 1960) is used as a basis for an experimental

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ACCESSION NR: AT4036080

investigation of transverse propagation of a plasma in a pulsed Philips source described elsewhere (L. A. Dushin et al. UFZh, 1963) with a discharge tube made of molybdenum glass 130 cm long and 10 cm in diameter. An external homogeneous magnetic field of sinusoidal form was used with a period much longer than the lifetime of the plasma. The field amplitude could be varied from 0 to 640 kA/m. The measurements were made during the time of plasma decay. Experiments were made also for longitudinal propagation of the plasma. They have shown that the use of longitudinal propagation for diagnostics can be quite effective in the case of a high-density plasma, when measurements at relatively low frequencies (compared with the plasma frequency) are possible. High accuracy can be attained by satisfying the conditions of geometrical optics, choosing the ratio of the time of pulse passage to the period of the signal frequency, and allowing for the inhomogeneity of the plasma. The experiments indicate that the methods described can be useful for a permanent or quasipermanent magnetic field. The use of transverse propagation is

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ACCESSION NR: AT4036080

particularly effective when the magnetic field is on the low side of resonance and close to it. Longitudinal propagation is effective when the electron density of the plasma varies little along the length of the column. Longitudinal measurements are also convenient because high plasma concentrations can be measured with the aid of decimeter and centimeter wavelengths. Orig. art. has: 7 figures and 17 formulas.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 21May64

ENCL: 02

SUB CODE: ME

NR REF SOV: 003

OTHER: 001

Card 3/5

ACCESSION NR: AT4036080

ENCLOSURE: 01

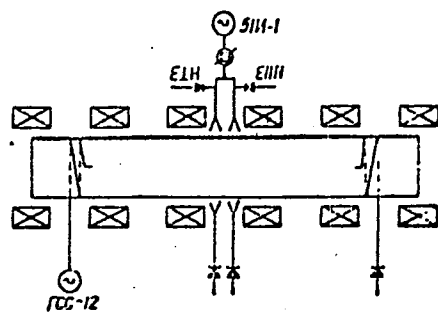
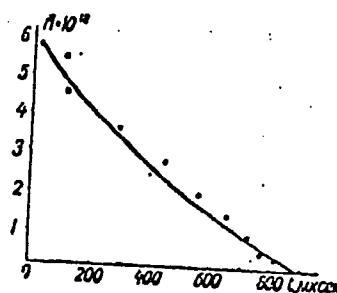
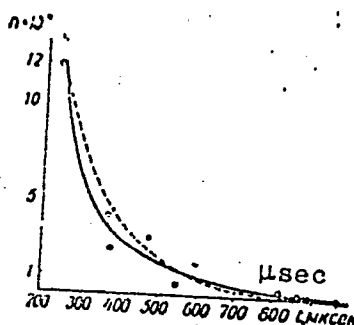


Diagram of set-up

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ACCESSION NR: AT4036080

ENCLOSURE: 02



Time dependence of electron density in transverse propagation (left) and of the average density (right)

Card 5/5

1 37551-86 EMT(1)/RFP(2)/SFC(1)/ENG(1) I.F.(c) AT/GS/AD
ACC NR: AT6008859

SOURCE CODE: UR/0000/65/000/000/0189/0198.

AUTHOR: Dushin, L. A.; Kononenko, V. I.; Kovtun, R. I.; Privezentsev, V. I.;
Skibenko, A. I.

ORG: none

TITLE: Studying a plasma by probing with microwaves

SOURCE: AN UkrSSR. Magnitnyye lovushki (Magnetic traps). Kiev, Naukova dumka, 1965,
189-198

TOPIC TAGS: microwave, plasma structure, plasma density, distribution function

ABSTRACT: The authors determine the spatial density distribution function for a plasma by comparing the average density measured by a microwave interferometer with the maximum density determined from the cutoff time of the microwave signals. These data were used for finding the recombination and diffusion coefficient and for estimating the electron temperature in the discharge. The experimental procedure is described in detail and the derivation of the analytical formulas used in the work is discussed. It is shown that curves for the average and maximum plasma densities or their logarithms as functions of time will coincide as long as there is no noticeable diffusion to destroy the initial distribution. The results confirm the data in the literature obtained by spectroscopic analysis of a Phillips discharge. Orig. art. has: 4 figures, 17 formulas.

SUB CODE: 20/

SUBM DATE: 200ct65/

ORIG REF: 005/

OTH REF: 002

Card 1/1 *165*

L 23564-66

EWT(1)/ETC(f)/EPF(n)-2/EWG(m)

IJP(c)

GS/AT

ACC NR: AT6008857

SOURCE CODE: UR/0000/65/000/000/0166/0179

AUTHOR: Dushin, L. A.; Kovtun, R. I.; Privezentsev, V. I.; Skibenko, A. I.

ORG: none

TITLE: Microwave refraction by a nonhomogeneous cylindrical plasma

SOURCE: AN UkrSSR. Magnitnyye lovushki (Magnetic traps). Kiev, Naukova dumka, 1965, 166-179

TOPIC TAGS: microwave, plasma density, plasma physics, distribution function

ABSTRACT: The authors consider transmission of microwave beam through a cylindrical plasma with radial density distribution of the form

$$\frac{N(r)}{N_{cr}} = k[1 - (\frac{r}{r_0})^\gamma]$$

where $k = \frac{N_{max}}{N_{cr}}$ and N_{max} is the density at the axis of the cylinder. This ex-

pression is integrated with respect to the radius and then averaged to give

$$\gamma = \frac{\bar{N}/N_{max}}{1 - N_{max}/N_{cr}} = \frac{\bar{N}}{N_{max} - \bar{N}}$$

Card 1/2

L 23564-66

ACC NR: AT6008857

where \bar{N} is the density averaged with respect to the radius. Thus a distribution function may be easily found which gives a nearly homogeneous form of distribution at large γ and is close to a δ -function when $\gamma \rightarrow 0$, by simultaneously measuring the maximum density and the density averaged with respect to the radius. The trajectory of a microwave beam in a cylindrical plasma is calculated and the effect of beam distortion during measurement of signal attenuation is considered. Experiments are conducted to determine the density distribution in a discharge column. The experimental data are analyzed on the basis of the formulas derived in the paper. Orig. art. has: 8 figures, 21 formulas.

SUB CODE: 20/

SUBM DATE: 20Oct65/

ORIG REF: 006/

OTH REF: 004

Card 2/2 *FV*

L 17003-66 EWT(1)/EWA(h) SCTB DD

ACC NR: AT6003893

SOURCE CODE: UR/2965/65/004/000/0573/0580

AUTHOR: Maystrakh, Ye. V.; Il'yutkin, G. N.; Konstantinov, V. A.; Yeremenko, I. V.;
Krasil'nikov, S. A.; Lysenko, O. Yu.; Matsatsa, V. F.; Privezentsev, V. I. L.6
BT/

ORG: none

TITLE: Automatic apparatus to create reversible and controllable hypothermia for possible use in space flight 2

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy kosmicheskoy biologii, v. 4, 1965, 573-580

TOPIC TAGS: cybernetics, hypothermia, space physiology, physiologic parameter, space flight

ABSTRACT: The authors designed and tested an apparatus consisting mainly of a set of sensors of physiological functions and a logical device to process the readings of the sensors and to issue the appropriate commands for heating or cooling should the established parameters (e. g., rectal temperature, skin temperature, depth of respiration, arterial pressure, motor activity) be exceeded. The apparatus functioned very efficiently in experiments on 16 dogs with a body temperature of 22-

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L 17003-66
ACC NR: AT6003093

-25°C. The apparatus cooled the body to the prescribed level, maintained the desired level of hypothermia and state of anesthesia for up to 24 hours, and restored normal body temperature. The authors recommend a continuation of research with a view to perfecting the sensing elements, increasing the amount of information to be processed (brain and heart biopotentials), and providing the logical and control system with means of self-instruction and self-organization. Orig. art. has: 2 figures, 1 table.

SUB CODE: 06/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 000

Card 2/2 7195

MAYSTRAKH, Ye.V.; IL'YUTKIN, G.N.; KONSTANTINOV, V.A.; YEREMENKO, I.V.;
KRASIL'NIKOV, S.A.; LYSENKO, O.Yu.; MATSATSA, V.F.; PRIVEZENTSEV
V.I.

Automatic unit for developing reversible and controllable
hypothermia for possible use in space flight. Probl. kosm.
biol. 4:573-580 '65. (MIRA 18:9)

L 1918-66 EWT(1)/ETC/EPF(n)-2/EWG(m)/EPA(w)-2 LJP(c) AT
 ACCESSION NR: AP5024128

UR/0185/65/010/009/0977/0984

AUTHOR: Dushin, L. O. (Dushin, L. A.); Kononenko, V. I.; Kovtun, R. I.;
 Pryvezentsev, V. I. (Privezentsev, V. I.); Skybenko, A. I. (Skibenko, A. I.)

TITLE: Plasma investigation by means of the interferometer and the microwave cut-off method

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 9, 1965, 977-984

TOPIC TAGS: plasma decay, plasma measurement, plasma diffusion, plasma electron temperature, plasma diagnostics

ABSTRACT: The present paper describes a method for the study of plasma decay permitting a simultaneous measurement of phases and amplitudes of signals transmitted through the plasma. The phases were measured at 136 Gc/s and the amplitudes at 136.74 and 37 Gc/s. A method for plasma diagnostics by means of signals with different frequencies is also presented. An approximation of the radial plasma density distribution by means of the $F \approx 1 - (r/R)^2$ function is discussed (r is estimated by the measured mean electron density and the maximum density decrease, R is the radius of the plasma cylinder). An estimate is also made of the relative contributions of recombination and diffusion to the plasma decay process. In the

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L 1918-66

ACCESSION NR: AP5024128

3
case where recombination is predominant, the recombination coefficient was determined, from which the electron temperature was deduced. A comparison of this temperature with the temperature value obtained by microwave attenuation indicates satisfactory agreement of both methods. Orig. art. has: 27 formulas, 2 figures, and 2 tables.

ASSOCIATION: Fizyko-tekhnichnyy instytut AN URSR, Khar'kov (Physics-Engineering Institute, AN Ukr.SSR) 44.55

SUBMITTED: 09Nov64

ENCL: 00

SUB CODE: ME

NO REF SOV: 005

OTHER: 004

mlr
Card 2/2

ACCESSION NR: AT4025301

S/0000/63/000/000/0117/0123

AUTHORS: Dushin, L. A.; Privezentsev, V. I.; Skibenko, A. I.

TITLE: Measurement of longitudinal radiowave propagation for plasma diagnostics

SOURCE: Diagnostika plazmy* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 117-123

TOPIC TAGS: plasma concentration, plasma electromagnetic property, electromagnetic wave propagation, phase shifter, phase velocity, group velocity

ABSTRACT: It is shown that the density of the plasma can be determined by measuring the phase shift of a radio wave transmitted through the plasma. The propagation of the signal in the ionized plasma in the magnetic field is characterized in the case of longitudinal propagation by the phase and group velocities of the signal. Con-

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ACCESSION NR: AT4025301

sequently, by measuring the delay time of the signal it is possible to determine the electron density at a given instant of time. Experiments were performed using a pulsed source with a molybdenum-glass discharge tube 10 cm in diameter and 130 cm long. The magnetic field could be varied from 0 to 8000 Oe. A 550 Mc signal was used, and helical antennas were used for the radiation and reception of the signal. The time dependence of the average density was determined from oscillogram patterns of signals of wavelengths 55 cm for longitudinal propagation and 8 mm for transverse propagation of the extraordinary and ordinary waves (magnetic fields 1400 Oe, pressure approximately 10^{-2} mm Hg, sweep duration 1200 μ sec). The results obtained (delay 0.12 μ sec, density 2×10^{14} cm^{-3}) agree well with theory and also with other experiments (O. Pavlichenko, L. Dushin "Optika i spektroskopiya" v. 12, 541, 1962). Orig. art. has: 4 figures and 10 formulas.

ASSOCIATION: None

Card 2/5

ACCESSION NR: AT4025301

SUBMITTED: 19Oct63

DATE ACQ: 16Apr64

ENCL: 02

SUB CODE: ME, EC

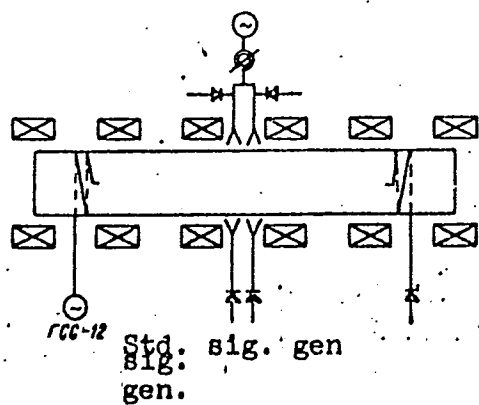
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OTHER: 000

Card 3/5

ACCESSION NR: AT4025301

ENCLOSURE: 01

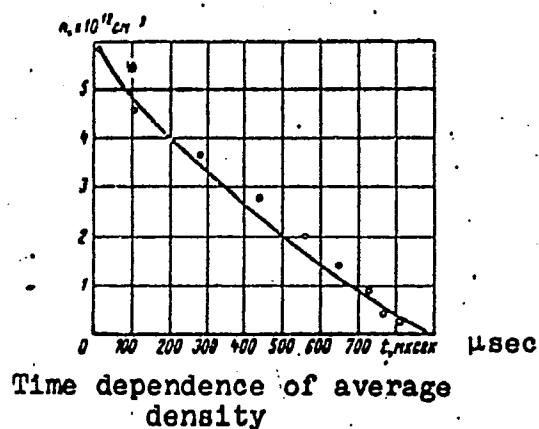


Measurement set-up

Card 4/5

ACCESSION NR: AT 4025301

ENCLOSURE: 02



Card 5/5

ACCESSION NR: AT4036078

S/2781/63/000/003/0348/0353

AUTHORS: Azovskiy, Yu. S.; Guzhovskiy, I. T.; Dushin, L. A.; Prive-
ezentsev, V. I.; Churayev, V. A.

TITLE: Microwave methods of plasmoid diagnostics

SOURCE: Konferentsiya po fizike plazmy* i problemam upravlyayemogo
termoyadernogo sinteza. 3d, Kharkov, 1962. Fizika plazmy* i prob-
lemy* upravlyayemogo termoyadernogo sinteza (Plasma physics and prob-
lems of controlled thermonuclear synthesis); doklady* konferentsii,
no. 3. Kiev, Izd-vo AN UkrSSR, 1963, 348-353

TOPIC TAGS: plasmoid, plasmoid acceleration, plasma source, plasma
density, plasma wave reflection, plasma wave absorption, Doppler
effect

ABSTRACT: Several microwave methods used to determine the density
and translational velocity of charged particles in a plasmoid. The

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ACCESSION NR: AT4036078

plasmoids were obtained with a conical source from a 6.1 μF capacitor bank. The plasmoid propagated in a glass tube 60 mm in diameter and 1.2 meters long. The pressure in the vacuum system did not exceed $2.7 \times 10^{-3} \text{ n/m}^2$. The electron density was determined from the "cutoff" of the microwave signal, corresponding to the critical density for the given frequency. The plasmoid velocity was determined by the Doppler effect, except that the velocity of the layer with low electron density ($10^{10} \text{--} 10^{11} \text{ cm}^{-3}$) was determined by measuring the detuning of a cavity resonator. The tests have shown that different layers of the plasmoid move with different velocities and this causes the leading front of the plasmoid to become less steep as it moves. "The authors are grateful to B. G. Safronov for a discussion of the results and to O. G. Zagorodnyy for useful advice during the measurements with the cavity resonator." Orig. art. has: 7 figures and 2 formulas.

Cord 2/5

ACCESSION NR: AT4036078

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 21May64

ENCL: 02

SUB CODE: ME

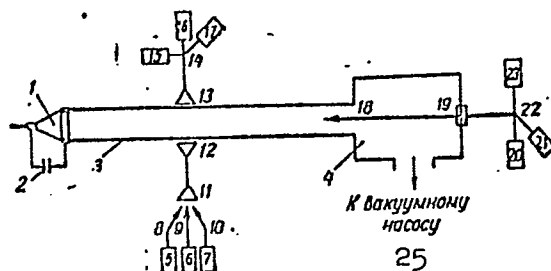
NR REF SOV: 003

OTHER: 001

Card 3/5

ACCESSION NR: AT4036078

ENCLOSURE: 01

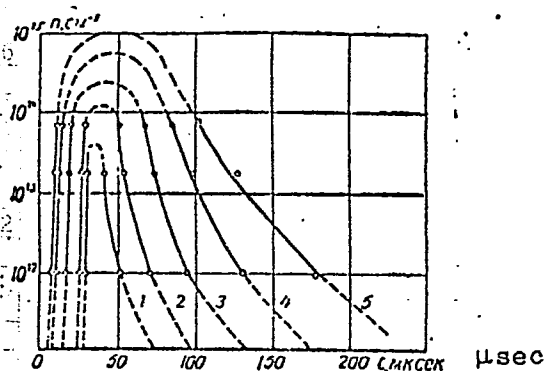


Block diagram of set-up: 1 - conical source; 2 - capacitor bank; 3 - glass tube; 4 - vacuum chamber; 5, 6, 7, 21 - generators; 8, 9, 10, 18 - dielectric antennas; 11 - input horn of waveguide channels; 12, 13 - horns irradiating the plasma; 14, 22 - double waveguide tees; 15, 16, 17, 23 - detector heads; 20 - matching unit; 19 - vacuum seal, 25 - to vacuum pump

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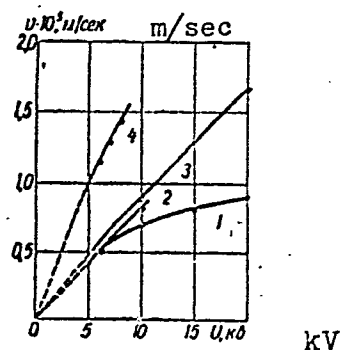
ACCESSION NR: AT4036078

ENCLOSURE: 02



Distribution of charged-particle density in plasmoids at different voltages (kv): 3 (1), 4 (2), 6 (3), 8(4), and 10 (5). Time measured from start of discharge

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Dependence of initial velocity of different layers of the plasmoid on the initial capacitor bank voltage; densities: 1 - maximum $2 \cdot 10^{12}$ (Doppler effect), 3 - 10^{12} (hf signal cutoff), 4 - 5×10^{10} (cm^{-3})

L 15596-63 EWT(1)/EWG(k)/BDS/ES(w)-2 AFFTC/ASD/ESD-3/AFWL/SSD

Pz-4/Pi-4/Pe-4/Pab-4 AT/IJP(C)

ACCESSION NR: APJ006492

8/0170/63/006/009/0057/0060

81
80

AUTHOR: Azovskiy, Yu. S.; Guzhovskiy, I. T.; Dushin, L. A.; Privezentsev, V. I.; Churayev, V. A.

TITLE: Microwave methods for diagnosing plasmoids

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 6, no. 9, 1963, 57-60

TOPIC TAGS: plasmoid electron concentration distribution, plasmoid critical electron density, plasmoid sharp front boundary, plasmoid velocity measurement

ABSTRACT: This article describes microwave methods for diagnosing plasmoids. The distribution of electron concentration in a plasmoid was studied and the velocity of the plasmoid determined. Plasmoids were produced by means of the discharge of a capacitor bank (6 μ f), through a conical source, and were propagated in a glass tube (6 cm in diameter and 120 cm in length) with a residual pressure not exceeding 2×10^{-3} newtons per square meter. Probing of plasmoids was carried out at three frequencies: 9×10^9 , 37.5×10^9 , and 75×10^9 cps, which correspond to critical electron densities of 10^{12} , 1.7×10^{13} , and 7×10^{13} cm^{-3} , respectively. The transmitting and receiving antennas were placed at a distance of 50 cm from the plasmoid source. It was found that plasmoids have a sharp front boundary.

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L 15596-63

ACCESSION NR: AP3006492

The plasmoid electron density at a 3-kv capacitor voltage was on the order of 10^{13} cm^{-3} . With an increase in voltage the electron density also increased to a value of 10^{15} cm^{-3} at a voltage higher than 10 kv. The velocities of plasmoids with electron densities of 10^{12} cm^{-3} have been measured by the Doppler effect. Velocity measurements of low-density plasmoids (10^{10} — 10^{11} cm^{-3}) were made by a method which employs a cavity resonator (9.6 cm in diameter and 100 cm in length) in which the H_{11} mode was excited at a frequency of 2.3×10^9 cps. A plasmoid was simulated by means of a metallic rod inserted into a glass tube placed inside the resonator. The insertion of the rod resulted in the detuning of the resonator and, at points corresponding to the cavity resonance dimensions, resulted in a sharp increase in the indicator voltage. From readings taken at various voltages across the capacitor bank, graphs were plotted of distance versus time for plasmoids with a density of $5 \times 10^{10} \text{ cm}^{-3}$. These graphs showed that different plasmoids moved with different speeds, which resulted in a decrease of the steepness of the plasmoid front as it moved along the tube. Orig. art. has: 4 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR, Khar'kov (Physicotechnical Institute, AN USSR)

Card 2/3 ✓

S/781/62/000/000/033/036

AUTHORS: Dushin, L. A., Kononenko, V. I., Privezentsev, V. I., Skibenko, A. I., Tolok, V. T.

TITLE: Microwave plasma diagnostics

SOURCE: Fizika plazmy i problemy upravlyayemogo termoyadernogo sinteza; doklady I konferentsii po fizike plazmy i probleme upravlyayemykh termoyadernykh reaktsiy. Fiz.-tekh. inst. AN Ukr. SSR. Kiev, Izd-vo AN Ukr. SSR, 1962, 156-164

TEXT: Several methods of plasma diagnostics are described, based on the interaction between the electromagnetic field and the plasma, with the electric field of the wave parallel to the external magnetic field, so that the external magnetic field does not influence the character of propagation of the microwaves used for the measurements. The real and imaginary parts of the coefficient of propagation of a microwave signal through a plasma determine the attenuation and the phase constant of the wave. The plasma density is determined by the frequency at which the microwave signal ceases to pass through the plasma. The character of variation of the microwave signal as a function of the pressure was also

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Microwave plasma diagnostics

S/781/62/000/000/033/036

determined. Measurements of the variation of the phase and attenuation of the signal make it possible to follow the variation of the density and the electron collision frequency during the decay of the plasma. Phase measurements yielded also data on the distribution of electron density along the radius. At the present time the use of microwave diagnostics is limited by the capabilities of the microwave radiation sources. Present microwave generators have sufficient power to diagnose plasmas with electron densities near 10^{15} per cu. cm. Once submillimeter equipment is available, the densities can probably be raised to 10^{16} - 10^{18} el/cm³. There are 11 figures. Reference is made to work by Wharton (ref. 4, Microwave diagnostics for controlled fusion research, UCRL, 1957) and by Wharton and Slager (J. Appl. Phys. 31, 428 - 430, 1960).

Card 2/2

ACC NR: AT5028593

44, 55 44, 55 44, 55
LJP(c) AT/GS

SOURCE CODE: UR/0000/65/000/000/0512/0519

AUTHOR: Dushin, L. A.; Privezentsev, V. I.; Skibenko, A. I.

ORG: none

90
B+1

TITLE: Use of transverse extraordinary waves in plasma diagnostics

SOURCE: Konferentsiya po fizike plazmy i problemam upravlyayemogo termoyadernogo sinteza. 4th, Kharkov, 1963. Fizika plazmy i problemy upravlyayemogo termoyadernogo sinteza (Physics of plasma and problems of controllable thermonuclear synthesis); doklady konferentsii, no. 4. Kiev, Naukova dumka, 1965, 512-519

TOPIC TAGS: plasma diagnostics, microwave spectroscopy, gas discharge spectroscopy

ABSTRACT: The extraordinary wave is used in conjunction with the usually employed ordinary wave to expand the microwave diagnostic techniques to the measurement of both electron density and collision frequency in a plasma. It is shown that the form of the dielectric constant associated with the extraordinary wave determines three electron density values (all within a factor of 2 for magnetic field of 310 kA/m). This was also confirmed experimentally and shown to be in agreement with the control data obtained using the ordinary wave. In the case when collisions in the plasma cannot be neglected, it is necessary to consider the attenuation of the extraordinary wave, which depends on magnetic field intensity, collision frequency, and density. An

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L 10224-66

ACC NR: AT5028593

attenuation coefficient is plotted for several sets of these parameters. This is in turn used with the ordinary wave cut-off data to obtain the collision frequency. Experimental data obtained by using both waves (8 mm wavelength) is used to determine the collision frequency in the decaying plasma of a pulsed Phillips discharge. Phase changes in the transmitted wave are also briefly discussed, and it is pointed out that its measurement can be useful for diagnostics only at higher magnetic fields.

[14]

SUB CODE: 20

SUBM DATE: 20May65/

ORIG REF: 003/

OTH REF: 001

ATD PRESS: 4163

Card 2/2

L 10238-66 EWT(1)/ETC/EPF(n)-2/ENG(m) IJP(c) AT/GS
 ACC NR: AT5028594 SOURCE CODE: UR/0000/65/000/000/0519/0526
 44.55 44.55 44.55
 AUTHOR: Dushin, L. A.; Privezentsev, V. I.; Skibenko, A. I. 55
 B+1
 ORG: none
 TITLE: Microwave methods of plasma diagnostics employing longitudinal propagation of radiowaves
 SOURCE: ^{44.55} Konferentsiya po fizike plazmy i problemam upravlyayemogo termoyadernogo sinteza. 4th, Kharkov, 1963. Fizika plazmy i problemy upravlyayemogo termoyadernogo sinteza (Physics of plasma and problems of controllable thermonuclear synthesis); doklady konferentsii, no. 4, Kiev, Naukova dumka, 1965, 519-526
 21, 44, 55 21, 44, 55
 TOPIC TAGS: plasma diagnostics, microwave spectroscopy
 ABSTRACT: Application of microwaves propagating in plasma along the direction of the external magnetic field is considered in order to broaden the scope of measurements of plasma parameters. The general form of the index of refraction for both ordinary and extraordinary waves which is valid for some arbitrary direction of the magnetic field relative to the direction of the incident wave is considered. The form of the phase and the attenuation coefficient for the wave in the same degree of generalization is also utilized. Both hold for situations where the collision frequency is not negligible. The values of magnetic field density and collision frequency
 Card 1/2

L 10238-66

ACC NR: AT5028594

quency are delineated to establish the regions of propagation of ordinary and extraordinary waves. Additionally, it is pointed out that since the travel time of the probing microwave signal depends on the plasma density (and is inversely proportional to group velocity), the delay between sending and receiving the signal can also be utilized for determination of plasma parameters. For this purpose, the group velocity for various densities and magnetic fields is plotted for both types of waves. The phase relation, attenuation coefficient, and the delay time were used in an experimental study of plasma parameters. Maximum magnetic field obtainable was 796 kamp/m. To check these results a transversely propagating wave of shorter wavelength was also used. The measurements so obtained confirm the validity of the new method described in this work. The new method can be used to study plasmas with densities higher than the cutoff density and make it possible to determine the collision frequency at the same time. Orig. art. has: 8 figures, 9 formulas. [14]

SUB CODE: 09, 17/ SUBM DATE: 20May65/ ORIG REF: 003/ OTH REF: 002
ATD PRESS: 4163

Card 2/2

DUSHIN, L.A. [Dushyn, L.O.]; KONONENKO, V.I.; KOVTUN, R.I.; PRIVEZENTSEV,
V.I. [Pryvezentsev, V.I.]; SKIBENKO, A.I. [Skybenko, A.I.]

Use of an interferometer and the microwave cut-off method in
studying a plasma, Ukr. fiz. zhur. 10 no.9:977-984 S '65.
(MIRA 18:9)

1. Fiziko-tekhnicheskiy institut AN UkrSSR, Khar'kov.

PRIVESENTSEV, V.P.

The VPU-1 portable vibrometer. Biul.tekh.-ekon.inform.Gos.nauch.-issl.-
inst.nauch. i tekh.inform. no.8:45-46 '62. (MIRA 15:7)
(Vibration—Measurement)

PRIVEZENTSEV, Ya.G.; IGNATENKO, V.Ya., master kamennykh rabot.

Improving furnace resistance. Metallurg 2 no.1:18 Ja '57.
(MLRA 10:4)

1. Nachal'nik martenovskogo tsekha no.1 (for Privezentsev)
2. Zhdanovskiy zavod im. Il'icha (for Ignatenko)
(Open hearth furnaces) (Refractory materials)

AUTHOR: Privezentsev, Ya.G. Manager, ~~and Ignatenko, V.Ya.~~ ²³⁶ Foreman
mason No. 1 shop at the Zhdanov im. Ilich Works.

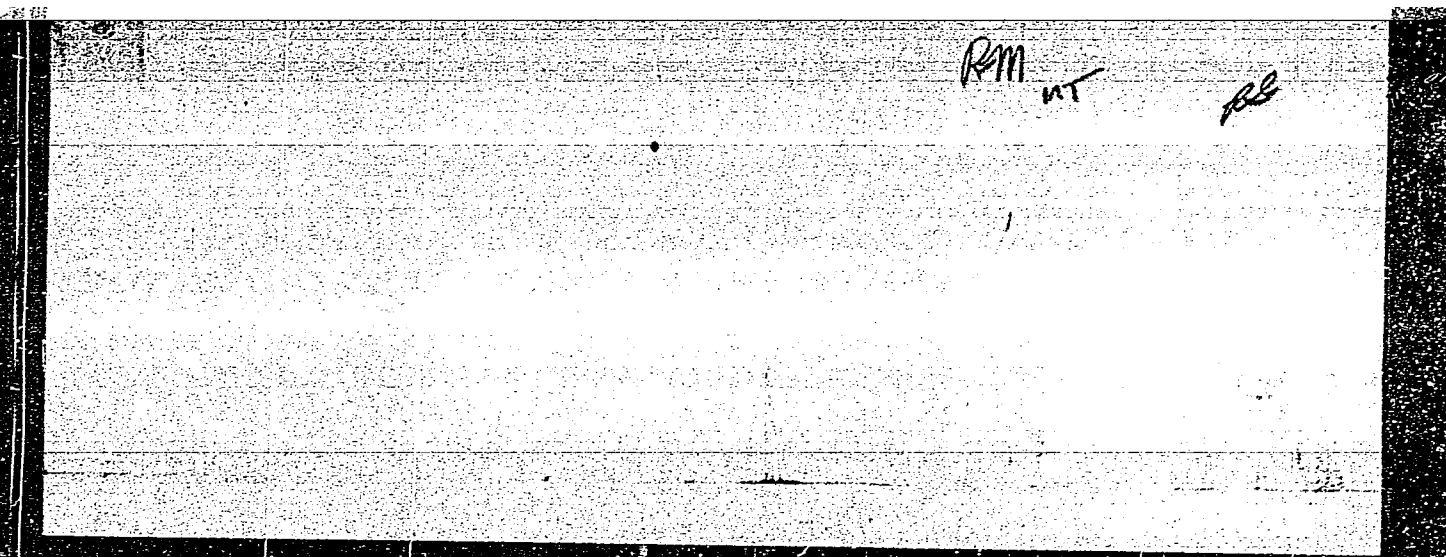
TITLE: Improving furnace life (Uluchshenie Stoykosti Pechey).

PERIODICAL: "Metallurg" (Metallurgist),
1957, No. 1, p. 18, (U.S.S.R.)

ABSTRACT: Successive changes in checker material for O.H. furnace regenerators and in furnace bricks are described. Latest practice in No. 1 O.H. shop is to use chrome-magnesite and fireclay bricks for the upper and other layers, respectively, of the regenerators; during cold repairs the checkers are blasted with air at 3 - 4 atm. gauge. For the furnace front arches and columns and for the back wall above the slag zone, ordinary chrome-magnesite bricks with metal spacers are now used. Cut chrome-magnesite bricks are used for the skew-backs. Considerable, ~~but~~ (but unspecified) economies in fuel and refractory consumption and in metal costs as well as increases in productivity are said to have resulted from these measures.

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001343110005-3



APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001343110005-3"

kand.ekonom.nauk; GOL'DBERG, Abram Mikhaylovich, starshiy prepodavatel'; PRIVEZENTSEVA, A.G., red.; PYATAKOVA, N.D., tekhn.red.

[Statistical study of labor productivity in industry; based on materials of the Odessa Economic Council] Statisticheskoe izucheniye proizvoditel'nosti truda v promyshlennosti; po materialam predpriyatii Odesskogo sovnarkhoza. Moskva, Gos.stat. izd-vo, 1959. 129 p. (MIRA 13:2)

(Odessa Province--Productivity accounting)

ZASTENKER, Grigoriy Semenovich; ZHAK, D.K., kand. ekon. nauk, red.;
PRIVEZENTSEVA, A.G., red.; PYATAKOVA, N.D., tekhn. red.

[Planning machine accounting with the use of digital punched
card machines] Proektirovanie mekhanizirovannogo ucheta s
primeneniem tsifrovyykh schetno-perforatsionnykh mashin; ucheb-
noe posobie dlia podgotovki proektirovshchikov mekhanizirovan-
nogo ucheta. Moskva, Gosstatizdat, 1963. 487 p.

(MIRA 16:8)

(Machine accounting) (Punched card systems)

DARAGAN, M.V.; BUTKOVSKAYA, N.V.; BRONSHTEYN, P.B.; PRIVEZENTSEVA, A.G.,
red.; PYATAKOVA, N.D., tekhn.red.

[Labor statistics in industry and construction] Statistika truda
v promyshlennosti i stroitel'stve. Moskva, Gosstatizdat TsSU SSSR,
1960. 122 p. (MIRA 13:9)
(Industrial statistics)

PUGACHEVA, Antonina Aleksandrovna; PRIVEZENTSEVA, A.G., red.;
PYATAKOVA, N.D., tekhn. red.

[Methods for the economic and statistical analysis of
processes involved in the supply of materials and equip-
ment] Metody ekonomiko-statisticheskogo analiza protses-
sov material'no-tekhnicheskogo snabzheniia. Moskva, Izd-
vo "Statistika," 1964. 93 p. (MIRA 17:3)

VYKHODTSEV, Semen Vasil'yevich; BAKLANOV, G.I., red.; DZHAPARIDZE, V.V., red.; PRIVEZENTSEVA, A.G., red.; PYATAKOVA, N.D., tekhn. red.

[Statistics of the petroleum industry] Statistika neftianoi promyshlennosti. Moskva, Gosstatizdat 1962. 278 p.

(MIRA 16:4)

(Petroleum industry--Statistics)

KVASHA, Yakov Bentsianovich; PRIVEZENTSEVA, A.G., red.; PYATAKOVA, N.D.,
tekhn.red.

[Statistical study of labor mechanization] Statisticheskoe
izucheniye mekhanizatsii truda. Moskva, Gos.stat.izd-vo, 1959.
144 p. (MIRA 12:10)
(Machinery in industry--Statistics)

ADAMOV, Vladimir Yevgen'yevich; BAKLANOV, G.I., red.;
PRIVEZENTSEVA, A.G., red.

[Statistical study of the regular flow of industrial
production] Statisticheskoe izucheniye ritmichnosti pro-
myshlennogo proizvodstva. Moskva, Statistika, 1965. 186 p.
(MIRA 18:4)

PEREGUDOV, Vladimir Nikitich; PRIVEZENTSEVA, A.G., red.

[Method of least squares and its use in research] Metod
naimen'shikh kvadratov i ego primeneniye v issledovaniyakh.
Moskva, Statistika, 1965. 339 p. (MIRA 18:6)

SADEKOV, Mansur Makhmutovich, kand.ekonom. nauk; YAKOVLEV, Vasilii
Mikhaylovich; PRIVEZENTSEVA, A.G., red.; PRYTKOVA, R.N.,
tekhn. red.

[Statistics of retail prices in state and cooperative trade]
Statistika roznichnykh tsen gosudarstvennoi i kooperativnoi
torgovli. Moskva, Gosstatizdat TsSU SSSR, 1961. 93 p.
(MIRA 15:2)

(Retail trade) (Prices)

MARKUZON, Fedor Davidovich; PRIVEZENTSEVA, A.G., red.; SEULEVICH, B.Ya., red.; VASIL'KOVA, Ye.V., tekhn. red.; IL'YUSHENKOVA, T.P., tekhn. red.

[Sanitation statistics in prerevolutionary Russia and in the U.S.S.R.] Ocherki po sanitarnoi statistike v dorevoliutsionnoi Rossii i v SSSR. Moskva, Gosstatizdat, TsSU SSSR, 1961. 129 p.
(Sanitation—Statistics) (MIRA 15:2)

MAIZEL'S, David L'vovich; PRIVEZENTSEVA, A.G., red.; BUDYANSKIY, I.V.,
red.; KAPRALOVA, A.A., tekhn. red.

[Statistics of capital construction] Statistika kapital'nogo
stroitel'stva. Moskva, Gosstatizdat, 1962. 238 p.
(MIRA 15:10)

(Construction industry--Statistics)

BATKIS, Grigoriy Abramovich, prof. (1895-1960); MERKOV, A.M., prof., red.;
PRIVEZENTSEVA, A.G., red.

[Problems in health and vital statistics; selected works]
Voprosy sanitarnoi i demograficheskoi statistiki; izbran-
nye proizvedeniia. Moskva, "Statistika," 1964. 289 p.
(MIRA 17:6)

1. Chlen-korrespondent AMN SSSR (for Batkis).

KURKIN, Petr Ivanovich, prof., zasluzhennyy deyatel' nauki [1858-1934];
MERKOV, A.M., prof., red.; PRIVEZENTSEVA, A.G., red.; KAPRALOVA,
A.A., tekhn.red.

[Problems of medical statistics] Voprosy sanitarnoi statistiki;
izbrannye proizvedeniia. Pod red. A.M.Merkova. Moskva, Gos-
statizdat TsSU SSSR, 1961. 421 p. (MIRA 15:5)
(RUSSIA--STATISTICS, MEDICAL)

BRAGINSKIY, Boris Iosifovich; PRIVEZENTSEVA, A.G., red.; DUMNOV, D.I., red.;
VASIL'KOVA, Ye.V., tekhn. red.

[Statistical groupings of collective and state farms based on labor
productivity] Statisticheskie gruppirovki kolkhozov i sovkhozov po
proizvoditel'nosti truda. Moskva, Gosstatizdat TsSU SSSR, 1961.
114 p.

(Agriculture--Labor productivity) (MIRA 14:11)

GAABE, Yulius Eduardovich; LEVITIN, I.I., red.; PRIVEZENTSEVA, A.G., red.;
MELENT'YEV, A.M., tekhn.red.

[Collection of problems in agricultural statistics] Sbornik zadach
po statistike sel'skogo khoziaistva. Izd. 2., dop. 1 perer.
Moskva, Gos. stat. izd-vo, 1958. 173 p. (MIRA 12:1)
(Agriculture--Statistics)

AUTHORS: Ginsburg, V. A., Privezentseva, N. F. 79-28 3-39/61

TITLE: On Iodine Derivatives of Methylphosphine (O yodistykh proizvodnykh metilfosfina)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 3, pp. 736-739 (USSR)

ABSTRACT: Of the iodine anhydrides of phosphorus organic acids only phenyldi-iodo-phosphine has been described until now. It was synthesized according to ref. 2 by the reaction of phenyldichlorophosphine with gaseous hydrogen iodide as hydriodide. It was shown that for the synthesis of the alkyl-phosphine iodide the reaction of chloroanhydrides of alkylphosphinic- and alkylsubphosphinic acids with hydrogen iodide can be valid. This is shown in this work by the formation of iodine derivatives in methylphosphine. In treating dichloranhydride of the methylphosphinic acid with gaseous hydrogen iodide dark-green crystals of the iodine derivative CH_3PI_2 are precipitated, which, dissolved in water converts to methylphos-

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On Iodine Derivatives of Methylphosphine

79-28.3-39/61

phinic acid with strong separation of iodine. As is known, pentaiodide is very unstable. According to Fursman and Lipkin (Ref. 3) some compounds of three-valent phosphorus (triphenylphosphite!) form a number of iodine derivatives with a complex-bound iodine, among them $(C_6H_5O)_3PJ_4$ and $(C_6H_5O)_3PJ_9$. In order to prove that the methyltetraiodide phosphorus synthesized by the authors derives from five-valent phosphorus as regards its structure it was treated with an excess of dry sodium ethylate on which occasion a diethylmethylphosphinate resulted ^{under} conditions excluding oxidation; this excludes to a certain extent the possibility of a complex structure in form of $CH_3PJ_2 \cdot J_2$. Besides methyltetraiodide of phosphorus, a resinous product was obtained which on the action of water converts to methylphosphinic acid. All in all the reaction process can be represented by the following formula: $3CH_3POCl_2 + 8 HJ \rightarrow 2 CH_3PJ_4 + CH_3PO(OH)_2 + 6 HCl$. In the reaction of methylchlorophosphine with hydrogen a crystalline product is obtained which has the composition $CH_3PJ_2 \cdot HJ$, methyl-di-iodophosphine. It seems that the aliphatic dichlorophosphines react with HJ similar to the

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On Iodine Derivatives of Methylphosphine

79-28 3-39/61

aromatic ones (Refs. 1, 2): $\text{CH}_3\text{PCl}_2 \xrightarrow{3\text{HJ}} \text{CH}_3\text{PJ}_2 \cdot \text{HJ} + \text{HCl}.$

The free methyliodidephosphine is obtained by the action of yellow phosphorus in carbon disulfide. All reactions within the series of methylphosphine iodides are represented by the last scheme.

There are 5 references, 1 of which is Soviet.

SUBMITTED: January 25, 1957,

Card 3/3

5.3700C

S/079/60/030/007/019/020
B001/B067 82301

AUTHORS: Ginsburg, V. A., Privezentseva, N. F., Shpanskiy, V. A.,
Rodionova, N. P., Dubov, S. S., Khokhlova, A. M.,
Makarov, S. P., Yakubovich, A. Ya.

TITLE: Reaction of Halogens, Nitrogen Oxide, and Polyfluorinated
Ethylenes in Ultraviolet Light. Synthesis and Thermal
Decomposition of Polyfluorinated Aliphatic Nitroso
Compounds

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 7,
pp. 2409 - 2415

TEXT: In continuation of their earlier paper (Ref. 1) the authors studied the reaction of polyfluorinated ethylene with NO and halogen in ultraviolet light. They assumed that atomic chlorine or bromine would also lead to the formation of β -halogen nitroso compounds. In fact, the authors of the present paper showed that in the reaction of nitrosyl chloride with symmetrical difluoro-dichloro ethylene, 1,2-difluoro-1,2,2-trichloro-nitroso ethane results in good yields. This compound

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Reaction of Halogens, Nitrogen Oxide, and
Polyfluorinated Ethylenes in Ultraviolet
Light. Synthesis and Thermal Decomposition of
Polyfluorinated Aliphatic Nitroso Compounds

S/079/60/030/007/019/020
B001/B067 82301

proved sufficiently stable and could be isolated (compound 6 in the Table). The experiments showed, as had been theoretically expected, that in all cases the corresponding nitroso alkanes were obtained in sufficient yields on irradiation of the gas mixtures $\text{NO} + \text{Cl}_2$ or $\text{NO} + \text{Br}_2$ with polyfluorinated ethylenes (such as tetrafluoro-, trifluoro-chloro-, or trifluoro ethylene at the ratio olefin : $\text{NO} : \text{Hal}_2 = 1 : 1 : 1/2$) (Table). These compounds have an intensive blue color, and are stable liquids. Besides them also the corresponding alkylene dihalides as well as β -nitrogen halide compounds are always separated from the reaction mass. Probably they are products of a partial oxidation of the nitroso compounds. In reducing the nitroso compounds obtained from trifluoro ethylene by means of hydrogen iodide the corresponding fluorides of the chloro-difluoro- and bromo-difluoro-acetohydroxamic acids are formed which indicates the addition of the halogen to the CF_2 group of the olefin in the reaction between NO , Hal_2 , and olefin. The pyrolysis of

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Reaction of Halogens, Nitrogen Oxide, and
Polyfluorinated Ethylenes in Ultraviolet
Light. Synthesis and Thermal Decomposition of
Polyfluorinated Aliphatic Nitroso Compounds

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B001/B067 82301

the $\text{ClCF}_2\text{CF}_2\text{NO}$ and $\text{NO}_2\text{CF}_2\text{CF}_2\text{NO}$ nitroso compounds at $120-130^\circ$ yields the
polyfluorinated ethylenimines $\text{ClCF}_2\text{CF}_2\text{N} = \text{CFCF}_2\text{Cl}$ and $\text{NO}_2\text{CF}_2\text{CF}_2\text{N} =$ X
 $= \text{CFCF}_2\text{NO}_2$, respectively. There are 1 table and 8 references: 3 Soviet,
1 US, and 2 German.

SUBMITTED: June 4, 1959

Card 3/3

YAKUBOVICH, A.Ya.; GINSBURG, V.A.; MAKAROV, S.P.; SHFANSKIY, V.A.;
PRIVEZENTSEVA, N.F.; MARTYNOVA, L.L.; KIR'YAN, B.V.; LEMKE, A.L.

Oxidation, reduction, and disproportionation of polyfluoronitrosoal-
kanes. Dokl. AN SSSR 140 no.6:1352-1355 0 '61. (MIRA 14:11)

1. Predstavleno akademikami I.L.Knunyantsem i M.I.Kabachnikom.
(Paraffins) (Nitroso compounds) (Oxidation-reduction reaction)

YAKUBOVICH, A.Ya.; MAKAROV, A.A.; SHESBURG, V.A.; PRIVETSEVA, N.F.;
MERTZOVA, L.L.

Pyrolysis and photolysis of polyfluoronitrosoalkanes, a
reaction of nitroso compounds with nitrogen oxide.

Dokl. AN SSSR 141 no.1:125-128 N '61. (MIRA 14:11)

1. Predstavleno chlenam i l.l. Krupyantsem i N.I. Kabachnikom.
(Nitroso compounds)
(Nitrogen oxide)

MAKAROV, S.P.; YAKUBOVICH, A.Ya.; GINSBURG, V.A.; FILATOV, A.S.; ENGLIN,
M.A.; PRIVEZENTSEVA, N.F.; PRIVEZENTSEVA, N.F.; NIKIFOROVA, T.Ya.

Reactions of polyfluorinated nitrosoalkanes with amines. Dokl.
AN SSSR 141 no.2:357-360 N '61. (MIRA 14:11)

1. Predstavleno akademikami I.L.Knunyantsem i M.I.Kabachnikom.
(Nitroso compounds) (Amines)

ACC NR: AP6030553

SOURCE CODE: UR/0413/66/000/016/0031/0032

INVENTOR: Martynov, I. V.; Privezentseva, N. F.; Kruglyak, Yu. L.

ORG: none

TITLE: Preparation of mixed esters of alkylfluorophosphoric acids and halogen substituted oximes. Class 12, No. 184847

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 31-32
phosphate,

TOPIC TAGS: alkyl fluorophosphate, halogenated oxime, dialkyl phosphate, ester, phosphoric acid, halogenated organic compound, organic oxime compound, chemical reaction

ABSTRACT: In the proposed method, mixed esters of alkylfluorophosphoric acids and halogenated oximes are obtained by the reaction of dialkyl phosphates with chloronitro- or chloronitrosomethanes in an inert solvent.
[WA-50; CBE No. 11]

SUB CODE: 07/ SUBM DATE: 17Aug63/

Card 1/1

UDC: 547.288.4'22'118.07

SAVEL'YEVA, Z.D., kandidat meditsinskikh nauk; PRIVEZENTSEVA, S.N.,
VOLKOVA, Z.A., kandidat meditsinskikh nauk

Effect of working conditions on the course of gynecological diseases
and pregnancy. Sov.zdrav. 16 no.8:21-25 Ag '57. (MLR 10:10)

1. Iz Instituta akusherstva i ginekologii Ministerstva zdravookra-
neniya RSFSR (dir. - dotsent L.G.Stepanov) i kafedry promyshlennoy
gigiyeny (zav. - prof. Z.D.Smelyanskiy) Tsentral'nogo instituta
usovershenstvovaniya vrachey

(INDUSTRIAL HYGIENE

eff. of working cond. in shoe factory on etiol. of
gyn. dis. & pregn.)

(PREGNANCY

eff. of working cond. in shoe factory)
(GYNECOLOGICAL DISEASES, etiol. and pathogen.
same)

PRIVEZENTSEVA, S.N., Cand Med Sci--(diss) "On the use of entrance-cranial
forceps in obstetrics." Mos, 1958. 15 pp (First Mos Order of Lenin
Med Inst in I.M.Sechenov) (IL,47-58, 135)

- 74 -

PRIVEZENTSEVA, S.N.

Use of scalp forceps in delivery. Akush. i gin. 33 no.2:31-36
Mr-Ap '57. (MLRA 10:6)

1. Iz Nauchno-issledovatel'skogo instituta akusherstva i ginekologii
(dir. L.G.Stepanov) Ministerstva zdravookhraneniya RSFSR.
(DELIVER
forceps, indic. & follow-up)

PRIVEZENTSEVA, S.N.

Treatment of nipple cracks with medication administered in form of
aerosols. Akush. i gig. 33 no.2:37-39 Mr-Ap '56. (MLRA 9:7)

1. Iz Instituta akusherstva i ginekologii (dir. L.G.Stepanov)
Ministerstva zdravookhraneniya SSSR.

(BREAST, dis.

nipple cracks, ther., aerosols)

(AEROSOLS, ther. use

nipple cracks)

LOKTIONOVA, N.A.; RASTVOROVA, N.M.; KOVRIZHNIYKH, V.G.; KOMAROVA, N.K.;
TELIS, M.Ya.; DOBATKIN, V.I., rukovoditel' raboty; Prinimali
uchastiye: VINOKUROV, N.G.; PONAGAYBO, Yu.N.; PERETYKINA, I.N.;
BULGAKOV, G.F.; PYATUNINA, V.I.; TITKOV, S.M.; KALMYKOV, K.V.;
BRASLAVSKIY, D.N.; VEYSMAN, S.Ya.; APER'YANOVA, N.H.;
PANTYUSHKOVA, N.S.; PRIVEZENTSEVA, T.V.

Ways to reduce warping of large-size parts made of the
AK4-1 alloy. Alum. splavy no.3:271-284 '64.

(MIRA 17:6)

L 26394-66 BPF(n)-2/EWT(d)/EWT(1) IJP(c) WW

ACC NR: AP6007192

SOURCE CODE: UR/0170/66/010/002/0252/0257

AUTHORS: Privin, M. R.; Chudnovskiy, A. F.

ORG: Aerophysics Institute, Leningrad (Aerofizicheskiy institut)

TITLE: The two-dimensional temperature field of a semiconductor thermopile

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 10, no. 2, 1966, 252-257

TOPIC TAGS: thermoelectric equipment, heat balance, semiconductor device, second order equation, differential equation, heat equation, thermal emf

ABSTRACT: Analytic relations for the two-dimensional temperature field of a semiconductor thermopile for steady-state operation are obtained. A cell of a thermopile bounded by two planes that pass through the middle of the cell and the middle of the insulating layer is selected. The temperature field of the cell is described by

$$\frac{\partial^2 T_1}{\partial x^2} + \frac{\partial^2 T_1}{\partial y^2} + \frac{\rho}{\lambda_1} = 0, \quad 0 \leq x \leq l, \quad 0 \leq y \leq \delta_1;$$

$$\frac{\partial^2 T_2}{\partial x^2} + \frac{\partial^2 T_2}{\partial y^2} = 0, \quad 0 \leq x \leq l, \quad \delta_1 \leq y \leq \delta.$$

with the boundary conditions

UDC: 536.21

Card 1/3

L 26394-66

ACC NR: AP6007192

$$\begin{aligned} x=0, \quad 0 < y \leq \delta; \quad T_1(x, y) &= T_2(x, y) = T_0; \\ x=l, \quad 0 < y \leq \delta; \quad T_1(x, y) &= T_2(x, y) = T_0; \\ 0 < x \leq l, \quad y=0; \quad \frac{\partial T_1}{\partial y} &= 0; \\ 0 < x \leq l, \quad y=\delta; \quad \frac{\partial T_2}{\partial y} &= 0; \\ 0 < x \leq l, \quad y=\delta; \quad T_1(x, y) &= T_2(x, y); \quad \lambda_1 \frac{\partial T_1}{\partial y} = \lambda_2 \frac{\partial T_2}{\partial y} \end{aligned}$$

The solutions

$$\begin{aligned} T_1(x, y) &= \frac{2}{l} \sum_{k=1}^{\infty} \left\{ \frac{i^2 \rho l^2 [1 - (-1)^k]}{(k\pi)^2 \lambda_1} \left[1 - \left(\lambda_2 \operatorname{ch} k\pi \frac{y}{l} \operatorname{th} k\pi \frac{\delta_2}{l} \right) \times \right. \right. \\ &\times \left. \left(\lambda_1 \operatorname{sh} k\pi \frac{\delta_1}{l} + \lambda_2 \operatorname{ch} k\pi \frac{\delta_1}{l} \operatorname{th} k\pi \frac{\delta_2}{l} \right)^{-1} \right] - \frac{[T(-1)^k - T_0] l}{k\pi} \right\} \sin k\pi \frac{x}{l}; \\ T_2(x, y) &= \frac{2}{l} \sum_{k=1}^{\infty} \left\{ \frac{i^2 \rho l^2 [1 - (-1)^k]}{(k\pi)^2 \lambda_2} \left[\left(\lambda_1 \operatorname{ch} k\pi \frac{\delta_2}{l} \operatorname{th} k\pi \frac{\delta_1}{l} \right) \times \right. \right. \\ &\times \left. \left(\lambda_2 \operatorname{ch} k\pi \frac{\delta_2}{l} + \lambda_1 \operatorname{ch} k\pi \frac{\delta_2}{l} \operatorname{th} k\pi \frac{\delta_1}{l} \right)^{-1} \right] - \frac{[T(-1)^k - T_0] l}{k\pi} \right\} \sin k\pi \frac{x}{l}. \end{aligned}$$

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ACC NR: AP6007192

give the values T_1 and T_2 at all points inside the region in question with the exception of its boundaries $x = 0$ and $x = 1$. The obtained formulas can also be used to determine the heat fluxes to the junctions of the pile. Orig. art. has: 28 formulas.

SUB CODE: 09, 20/ SUBM DATE: 01Jun65/ ORIG REF: 003/ OTH REF: 001

Card 3/3 *nc*

ZHABIN, A.I.; RYBAL'CHENKO, P.S.; PRIVIS, L.I.; PODMOGIL'NIY, V.I.

Lapping conic couplings of parts. Mashinostroitel' no.2:10-
12 F '64. (MIRA 17:3)

AUTHOR: Pritvits, N. A. (Novosibirsk) SOV/179-59-3-4/45

TITLE: The Hydraulic Calculation of a Round Sump with Continuous Circular Operation (Gidrodinamicheskiy raschet kruglogo tsirkulyatsionnogo otstoynika nepreryvnogo deystviya)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1959, Nr 3, pp 25-31 (USSR)

ABSTRACT: A diagram of a sump for collecting sediments at its bottom, designed by F. S. Salakhov in 1945 (p 25, fn 1) is illustrated in Fig 1. The motion of flow is of a helical character, which is described by Eq (1) for the limiting conditions Eqs (2), (3), where $\Psi(z, r)$ - function of the flow (Fig 2), k and C - constants, Q_1 - output of the purified liquid, Q_2 - flush output. The solution of the above equations can be found in two ways.

1) The function Ψ is substituted by the function U (Eq 4). Then Eq (1) will take the form of Eq (5) with the limiting conditions Eqs (6) and (7). Its solution

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can be presented as a Fourier series, Eq (8). Thus, the formula (9) is derived which can be written as Eq (13). The function ψ can be found from Eq (4) as Eq (14) when Eq (13) is substituted into Eq (8). The velocities are defined as follows: circular, Eq (15); radial, Eq (16); axial, Eq (17). In the case of the potential motion ($k = 0$), the function ψ is found from Eq (18) and the velocity components from Eqs (19), (20) and (21).

2) The function U (Eq 22) is used for ψ . Then Eq (1) will take the form of Eq (23) for the limiting conditions (24) and (25). The continuous solution is obtained when the right term of Eq (23) is equalized to zero and the condition (24) presented as Eq (26), where $J_1(x)$ - Bessel function, $Z_\lambda(z)$ - function, λ - parameter determined from Eq (24). The equation (25) is solved as Eq (28), where Z_n is found from Eq (31) and the limiting conditions are found from Eqs (32) and (33). Thus, the value of the

Card 2/3 function ψ can be derived from Eq (34). The velocities

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are defined as follows: circular, Eq (15); radial, Eq (35) (or Eq (37) for the potential motion); axial, Eq (36). The results of calculations are illustrated in Figs 3 and 4. Fig 3 shows the characteristics of the flow: a - helical, b - potential. Fig 4 represents the distribution of velocities: 1 - axial velocity v_z along the horizontal axis, 2,3,4 - radial velocity, v_r in vertical cross-sections, 5 - circular velocity, v_ϕ for $r = H$. The continuous lines represent the helical motion and the dashed lines represent the potential motion. Numerical values are given in cm/sec. There are 4 figures and 2 Soviet references.

SUBMITTED: February 13, 1959

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PRIVITZER, K. G.

②-3

40. Polarographic determination of Parathion (*p*-nitrophenyl diethyl-thiophosphate) - Parathion (*p*-nitrophenyl diethylthiophosphate) meghatározása polarográfiával - Gy. J. Jozsefvits and K. G. Privitzer. (Hungarian Journal of Chemistry - Magyar Kémiai Folyóirat - Vol. 59, 1953, No. 6, pp. 161-163, 3 figs., 2 tabs.)

The parathion content of insecticide preparations was determined by polarography. By using an appropriate buffer solution 50 per cent ethanol as solvent and methylene blue as standard, the obtained results were satisfactory and reproducible within 3 per cent. Description of the method: 150-200 mg of the technical grade active substance was dissolved in 100 ml of 95 per cent ethanol. 5 ml ethanol, 5 ml 1 per cent "ester oil" (ammonium salt of butyl-naphthalenesulfonic acid), 30 ml of standard solution were added to 5 ml of this stock solution and filled up with water to 50 ml. (Composition of the standard solution: 5.8 g potassium chloride + 8.8 g sodium acetate trihydrate + 3.65 ml glacial acetic acid + 0.375 g methylene blue + 500 ml ethanol, diluted with water to 1000 ml.) Experiments were carried out in a nitrogen atmosphere. The Parathion wave appeared at -0.60 v. The polarographic determination of the emulsion type insecticides was carried out directly whereas preparations for dusting and spraying were previously extracted. Gy. J.

BAKHAREV, V.I.; DOZORTSEV, M.S.; KOSARENKO, M.F.; SAPRONOV, V.A.;
PRIVLER, M.D.

Device for indicating the load on tear resistance testing
machines for given deformations. Kauch. i rez. 24 no.11:
49 '65. (MIRA 19:1)

1. Dnepropetrovskiy shinnyy zavod.

DOZORTSEV, M.S.; PRIVLER, M.D.

Attachment to the MRS-2-type machine for testing the dynamic
force of adhesion of a single cord thread to rubber. Kouch. i
rez. 23 no. 49 Ap'64 (MIRA 17:9)

1. Dnepropetrovskiy shinnyy zavod.

DOZORTSEV, M.S.; BAKHALEV, V.I.; PREVLER, M.D.

New circuit for emergency disconnection of laboratory rollers.
Kauch. i rez. 24 no.7:52-53 J1 '65. (MTPA 18:8)

1. Dnepropetrovskiy shinnyy zavod.

PRIVMAN, I.

A finance section is working constructively. Okhr.truda i sots.
strakh. no.5:42-44 My '59. (MIRA 12:9)

1. Obshchestvennyy instruktor po sotsial'nomu strakhovaniyu
Moskovskogo gorodskogo soveta professional'nykh soyuzov.
(Moscow--Insurance, Social)

KHAIT, S.Z.; PRIVMAN, R.Yu. [deceased].

Numbers of bacteria in bulk grain. Izv.vys.ucheb.zav.;pishch.
tekhn. no.5:13-16 '58. (MIRA 11:12)

1. Odesskiy tekhnologicheskii institut imeni I.V.Stalina,
kafedra biokhimii zerna i zernovedeniya.
(Wheat) (Bacteriology, Agricultural)

BC

Two types of respiration in course of embryonic development. T. I. PARVOLNEV (Compt. rend. Acad. Sci. U.R.S.S., 1940, 28, 187—190).—Residual respiration unaffected by KCN is inversely related to the rate of growth of frog or trout embryo. R. L. E.

USSR Union Inst. Lark + Rice, Fisheries, Leningrad

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

CA

Critical pressure of oxygen in water for various ages of the young *Salmo salar*. T. I. Privol'nev (All-Union Fisheries Inst., Leningrad). *Doklady Akad. Nauk S.S.S.R.* 58, 1170-81(1947).—Young individuals have the following av. survival periods in various kinds of water in respect to age: in river water the 35-40 day old specimens survive up to 350 min., this ability declines rapidly with age and 105 day specimens live no longer than 50 min.; a mixt. of 0.25 boiled water and 0.75 part river water gives figures somewhat below those cited above, while half boiled-half river water gives a curve lying below both of the above curves; in all cases the older individuals survive about 50 min. Concn. of O in the water which limits the survival ranges from 35% for 40 day specimens to 10% for 110 day specimens (the figures are based on 10 mg/l. = 100%).
(G. M. Kosolapoff)

PRIVOL'NEV, T.I.

2h73 Privol'nev, T.I. Elektronarkoz Ryb I Ego izpol'zovaniye V Zhivopishnom
Dele. Ryb. Khdz-Vo, 1949, No. 8, S. 14-15

So: Letopis' No33, 1949

PRIVOD'NEV, T. I.

32637. Kriticheskiye periody pri postembrional'nom razvitii ryb. Izvestiya vsesoyuz. nauchn. issled. In-ta oser. i rech. Ryb. khokh-va, T. xxix, 1949, s. 118-42. bibliogr: 22 nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 44, Moskva, 1949

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CA

Catalase of fish. T. I. Privochny (All Union Lake & River Fishery Inst., Leningrad). *Doklady Akad. Nauk S.S.S.R.* 70, 461-3(1950). -- Manometric detn. of catalase (by unit of O liberated from 1% H₂O₂ at pH 6.5) in blood of various fish gave the following values (in cu. mm. in 1st 25 min. per 1 cu. mm. of blood) which were essentially the same for both sexes: *Coregonus albula* 1211.1; *Myoxocephalus quadricornis* 1120.1; *Clupea harengus* 1076; (other specimens gave the very low value of 20.1, the difference being unexplained); *Leuciscus leuciscus* 851.2; *Lucioperca fluviatilis* 337.2; *Plecurostictus detrus* 851.2; *Lucioperca fluviatilis* 871.2; *Sardinia erythrophthalma* 1810; *Anchovy* 871.2; *Leuciscus idus* 622.8; *Gasterosteus aculeatus* 657.6; *Leuciscus idus* gave 76.8; *Alburnus alburnus* 498.0 (some specimens gave 381.0); *Rutilus rutilus* 415.2; *Leuciscus leuciscus* 381.0; *Rutilus rutilus* 368.4; *Ammodytes* 348.0; *Lota lota* 230.4; *Abramis brama* 229.2; *Blanca bjorkna* 121.2; *Acerina cernua* 39.6; *Esox lucius* 10.8; human blood 1448.4. By far the greatest catalase concn. in the blood is in the erythrocytes, but on prolonged storage it begins to permeate into the plasma upon cell destruction. The highest concn. in the tissues is found in the liver; lowest, in muscle. G. M. Kozolapoff

1951

PRIVOL'NEV, T. I.

USSR (600)

Fish Trade

Supplying aquariums with water in live-fish stores. Ryb. khoz. 28 no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, April 1952. UNCLASSIFIED.

1. PRIVOL'NEV, T. I.

2. USSR (600)

Salmon

7. Swelling of roe in salmon in early stages of development. Dok. AN SSSR 84, No. 3, 1952
Vsesoyuznyy Nauchno-Issledovatel'skiy Institut
Ozernogo i Rechnogo Rybnogo Khozyaystva
Leningrad Red. 1 Feb. 1952

9. Monthly List of Russian Accessions, Library of Congress,
September 1952, UNCLASSIFIED.

PRIVOL'NEV, T. I.

MD Effects of temperature and sunlight on the activity of catalase in fish. T. I. Privol'nev, *Izvest. Vsesoyuz. Nauch.*

Issledova-tel. Inst. Ozerogo i Rechnogo Khoz. 33, 127-32 (1953); *Referat. Zhur., Khim.* 1954, No. 43132.—The effects of temp. and sunlight on the activity of blood catalase (I) of fish were studied with a Warburg app. I activity was different in different kinds of fish, the highest being in blood of ling. A very low and nearly unchangeable I activity occurred at 5-28°. The activity slightly increased at 28° followed by a small decrease at 30-5°. The thermal stability of I from various kinds of fish was an index of the fish tolerance against heat. The I activity of blood of sprat, ide, ling, and dace (living in cold waters) decreased 86-95% from its original value after 30-min. incubation of the blood at 35°, while that of pike-perch, living in relatively warm waters, remained unchanged under these conditions. I from different kinds of fish differed in its sensitivity to sunlight; after 1-hr. illumination I of the blood of eel was 77.5% inactivated, while the blood I of smelt was inactivated only 40.6%. Violet light was the most destructive with respect to the I activity; red light had no effect. B. Wierbicki

PRIVOL'NEY, T. I. - KOROLEVA, N. V.

Oxygen - Physiological Effect

Critical for fish oxygen content in water, according to seasons and at various temperatures. Dokl. AN SSSR 89 no. 1, 1953

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

PRIVOL'NEV, T.I., doktor biologicheskikh nauk.

Physiological adaptations in fish to new environmental conditions.
Trudy sov.Ikht.kom. no.3:40-49 '54. (MLRA 7:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut ozernogo i rechnogo rybnogo khozyaystva - VNIORKh.
(Fishes--Physiology) (Adaptation(Biology))

PRIVOL'NEV, Trefim Ivanovich, professor; KHLATINA, Ye.S., redaktor; KISINA, Ye.I.
tekhnikheskiy redaktor.

[Transportation and storage of live fish] Perevezka i khranenie
zhivoi ryby. Moskva, Pishchepremizdat, 1956. 79 p. (MLRA 9:6)
(Fishes)